

# ABSTRACT

This invention provides a motor control apparatus and vehicle steering apparatus capable of determining whether the motor control CPU is normal or abnormal with an inexpensive structure. A monitor circuit 70 of an ECU 50 outputs a trigger signal trg based on an excitation signal of a motor resolver 42 from a trigger output circuit 71; samples and holds U-phase actual current value  $I_u$ , V-phase actual current value  $I_v$  and cos phase signal outputted from the motor resolver 42 with S/H circuit 72 based on the trigger signal trg; acquires q-axis current instruction value  $I_q^*$  through wiring 80; and determines whether the CPU 60 is normal or abnormal based on consistency or inconsistency of polarity signs introduced from the relation among the cos phase signal, q-axis current instruction value  $I_q^*$ , U-phase actual current value  $I_u$  and V-phase actual current value  $I_v$  based on a predetermined expression with an operational circuit 73, sign determining circuits 74, 75, 76, multiplying circuit 77 and sign comparing circuit 78 and outputs "1" as determination information if it is normal and "-1" if it is abnormal.